

What Is Claimed Is:

1. A window-integrated antenna in vehicles comprising a heating conductor field; which is provided for both FM reception as well as LMS reception, at least one decoupling element (6) being provided for the FM reception which has a high-frequency, low-resistance, but non-galvanic connection to the heating conductor field.
2. The window-integrated antenna as recited in Claim 1, wherein the decoupling element (6) for the FM reception is made up of at least one conductor which is situated essentially parallel to at least one boundary of the heating conductor field which is not formed by a busbar for the heating conductor field.
3. The window-integrated antenna as recited in Claim 1 or 2, wherein the decoupling element/conductor (6) is designed, with regard to its length and/or position, in such a way that a resonant impedance behavior occurs in the FM frequency range at its connection end.
4. The window-integrated antenna as recited in one of Claims 1 through 3, wherein antenna conductors (9) are situated in the heating conductor field essentially perpendicularly to the heating conductors (3) and are galvanically linked to the heating conductors (3).
5. The window-integrated antenna as recited in Claim 4, wherein the antenna conductors (9) are designed, with regard to their length and/or position, in such a way that a resonance-like behavior of the antenna occurs at the connection end of the decoupling element/conductor (6) in the FM range.

6. The window-integrated antenna as recited in one of Claims 1 through 5,
wherein at least one further decoupling element (62, 63) is provided for a different frequency range, e.g., for TV signals in the VHF/UHF range.
7. The window-integrated antenna as recited in Claim 6,
wherein the decoupling element for the FM reception (61) and the at least one further decoupling element (62, 63) are galvanically connected at their connection ends.
8. The window-integrated antenna as recited in one of Claims 1 through 7,
wherein multiple decoupling elements for the FM reception and further decoupling elements (61, 62, 63) for other frequency ranges are connected to a diversity switching device.
9. The window-integrated antenna as recited in one of Claims 1 through 8,
wherein a plurality of decoupling elements (6) including the decoupling element for the LMS reception are connected to a shared module carrier (10).
10. The window-integrated antenna as recited in one of Claims 1 through 9,
wherein a filter element (5) is provided in the heating current circuit.